

Count 31
massaging and/or tumbling smaller pieces of meat with one or more edible salts such that the proteins of the smaller pieces of meat solubilize and exude from the salt
5 treated pieces of meat and a layer of exudate of solubilized proteins forms on and covers the surfaces of the pieces of meat;

[decreasing the pH of the solubilized proteins by] mixing an acidifying agent into the layer of exudate of solubilized proteins to [with the pieces of meat thereby] selectively [denaturing] denature and [coagulating] coagulate the solubilized proteins such
10 that the smaller pieces of meat are mutually joined but themselves substantially retain the properties of unprocessed raw meat because proteins present in the smaller pieces of meat substantially do not denature and holding the pieces of meat against each other to form the coherent piece of meat,

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thereby forming an adhesive layer between the pieces of meat as the
15 solubilized proteins denature under influence of a decrease in pH resulting from the addition
of the acidifying agent, and

wherein the pH decrease is obtained by adding an additive causing a delayed acidification [in a quantity such that the pH value decreases] in the layer with solubilized proteins, said additive selected from the group consisting of gluconodeltalacton and an
20 encapsulated edible acid.

REMARKS

In the Preliminary Amendment filed June 30, 2000, Applicant indicated that an expert Declaration by a food technology specialist would be submitted in order to support Applicant's position that the mixing of the pieces of meat produced in making sausage according to the Weiss et al. patent is distinct from massaging and tumbling of meat to solubilize proteins thereon according to the present invention. Accompanying this

Supplemental Preliminary Amendment is a Declaration by Dr. Gerrit Wijngaards which details the critical distinctions between the process of the Weiss et al. patent and the claimed process. The details of the Declaration are not repeated herein, however, the following points merit emphasis.

The present invention is directed to a method of manufacturing a coherent piece of raw meat from smaller pieces of raw meat and includes the steps of massaging and/or tumbling the smaller pieces of meat with one or more edible salts so that the proteins of the meat solubilize and exude from the pieces of meat, whereby a layer of exudate of the solubilized proteins forms on and covers the surface of the pieces of meat. Subsequently, the pH of the solubilized pieces of the proteins is reduced by adding an acidifying agent which then forms an adhesive layer between the pieces of meat as the solubilized proteins denature. It is this adhesive layer which causes the pieces of meat to stick together.

Claim 1 has been amended to clarify the result of the action of the recited steps of the claimed invention. Support for the amendments to claim 1 can be found at least at page 4, lines 19-26, and page 5, lines 24-35.

A key aspect of the present invention is the step of massaging and/or tumbling of the pieces of meat. As set forth in Section 3 of the Wijngaards Declaration, this is a well-known process in the meat processing industry. When pieces of meat are massaged and/or tumbled, they become covered with visible masses of creamy paste-like and very tacky exudate. This is consistent with the description in Example 1 on page 12 of the present application of the resultant meat mass following tumbling being "chunks of meat lying in a slimy layer of solubilized exuded proteins." In contrast, the mixing of dry sausage as produced in the Weiss et al. patent is a very gentle process, whereby pieces of meat and fat remain separate so that the distinct components remain visible. No fusing of the components

is achieved; fusing of the components is unwanted. See Section 2 of the Wijngaards Declaration.

While the Weiss et al. patent describes adding an acidulant to the mixture described therein, the meat acidulents described in the Weiss et al. patent serve a very different purpose and produce a very different effect from the acidification step of the present invention. See Section 5 of the Wijngaards Declaration. In particular, the last bullet point in Section 5 presents comparative data on the cohesiveness and strength of a salami (as per the Weiss et al. patent) and a meat product produced according to that of the present invention. In particular, such a salami remains (at the processing stage at which it has not been dried yet) spreadable with a knife -- no adhesive layers have formed between the pieces of meat of a salami. Any acid added to the composition described in the Weiss et al. patent does not have the effect of acid coagulation to join pieces of meat together in an adhesive layer of exudated solubilized proteins. Otherwise, the salami would not be spreadable with a knife.

In contrast, upon producing a coherent piece of meat formed from raw pieces of meat according to the present invention, the piece of meat is extremely resistant to tearing and lacks an ability to be spread. The force required to tear apart a piece of meat formed according to the present invention is similar to that to tear a traditional piece of meat (a solid piece of meat not formed from a plurality of pieces of raw meat). Hence, the present invention is useful for producing a coherent piece of meat which has properties that are similar to a solid piece of meat and quite opposite to the properties of salami and other such products as produced according to the method of the Weiss et al. patent.

For the foregoing reasons and the reasons set forth in the Preliminary Amendment of June 30, 2000 and the Wijngaards Declaration, claims 1, 3, 8-12, and 14-20 are believed to define over the prior art of record and be in condition for allowance.

Respectfully submitted,

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